****
IM-1 MILLION
IN A
****

WELL FOLKS HERE WE ARE AGAIN AND THE FIRST THING I HAVE TO DO IS APOLOGIZE FOR THE DELAY IN THE NEWSLETTERS. WE OVER ESTIMATED THE ABILITIES OF THE POST OFFICE AND HOW I HAVE TO REVISE OUR ESTIMATION OF THE TIME IT WILL TAKE FOR THE LETTERS TO GET TO YOU. WE ARE STILL TRYING TO GET THEM TO THE POST OFFICE BY THE FIRST OF EACH MONTH AND THEN IT TAKES THEM 3 TO 4 WEEKS TO GET THEM DELIVERED. WE WOULD LIKE TO GO TO FIRST CLASS BUT THE COST IS PROHIBITIVE, SO PLEASE BEAR WITH US.

EDITOR

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FROM GERALD R NEEL

GERALD WRITES TO US WANTING SOME IHFORMATIOH ABOUT MODEMS AND COMPUSERVE.

ANSWER

TO START WITH THERE ARE SO MANY DIFFERENT TYPES OF MODEMS OUT THERE THAT I CAN'T DESCRIBE ALL OF THEM. HERE ARE THE THIHGS TNAT I THINK YOU HEED IH A MODEM 1. RS-232 TYPE INTERFACE, 2. NALF DUPLEX AND FULL DUPLEX MODE , 3. ORGINATE AND ANSWER ABILITY, 4. AND SOME LIGHTS TO SHOW YOU WHEN IT IS WORKIHG. TNE TWO BASIC TYPES ARE 1. DIRECT COHNECT = THIS PLUG INTO THE PNONE JACK AND 2. ACCOUSTICAL COHHECT = YOU PLACE THE HANDSET OF YOUR TELEPHONE IN TNIS TYPE. BOTH TYPES WORK REAL WELL.

HOW FOR COMPUSERVE, I KHOW THAT WE CAH RUN OH IT BUT I AM NOT UP ON EVERYTHING YOU CAN DO WITH THEM. TO GET THE FULL USE OF IT YOU NEED A WAY TO STORE THE DATA YOU GET (MY OPIHIOH) AND TNE BASIC MODEM PROGRAM WITH THE IM-1 DOES HOT ALLOW THIS RIGHT HOW, BUT I HAVE DEVELOPED A PROGRAM TO USE WNICH ALLOWS YOU TO PRINT AT THE SAME TIME YOU ARE COMMUNICATING WITH ANY COMPUTER. TNE ONLY DRAW BACK IS THAT IT REQUIRES A SECOND SI-232 INTERFACE ON THE IM-1. HOPEFULLY IH THE NEAR FUTURE I WILL HAVE IT FIXED WNERE TNE DATA CAN BE STORED ON TAPE AND DISC.

'''IF ANYBODY OUT THERE NAS ANYMORE INFORMATION ABOUT THIS OR EXAMPLES OF WHAT YOU ARE DOING WITH THE DIFFERENT COMPUTER SERVICES OUT THERE LET ME KHOW.

****

FROM RON FORBIS

RON NEEDS SOME HELP WITH SOME Z80 BASED MACHINE LAHGUAGE PROGRAMS FOR TELETYPE-MORSE CODE PROGRAMS. HE HAS SOME TNAT NE WOULD LIKE TO TRAHSLATE TO 6800 BASED MACHIHE LANGUAGE AHD WAS WONDERING IF ANYBODY OUT THERE WOULD LIKE TO TRY. IF SO DROP A LIHE TO US AND WE WILL TRY TO FORWARD IT TO RON. THERE ARE SEVERAL MEMBERS THAT WAHT THE SAME THIHG SO MAYBE YOU CAN ALL GET TOGEATHER OH IT.

****

STATEMENT ABOUT PROGRAM PRINT

SOME OF THE CHARACTERS ARE HARD TO MAKE OUT WHEN PRIHTED IN THE COMPRESSED MODE SO HERE IS A PRINTOUT SHOWING WHAT THEY ARE!!!!

↑ = * , () = ↓, ↑ = # , ↓ = & {} = ()

NOPE THIS HELPS YOU TO READ TNE PROGRAMS BETTER. EDITOR

****

MAINTENANCE HINTS

HERE IS A LIST OF SOME OF THE MOST COMMON PROBLEMS I HAVE HAD WITH THE IM-1 WHICH WILL HELP SOME OF THE MEMBERS.

1. BROKEN WIRES IN THE NPA-10 POWER PLUG. IF THE PLUG IS REMOVED A LOT YOU TAKE A CHANCE ON BREAKING ONE. SYMPTONS VARY WITH WHICH WIRE IS BROKEN.
2. THE POWER UNITS CAN OVERHEAT IF JUST LEFT PLUGGED INTO THE OUTLET. I WOULD SUGGEST PUTTING BOTH ON A EXTENSION CORD AND UNPLUGGING IT WHEN NOT IN USE. THIS ALSO PROTECTS THE UNIT FROM LIGHTNING.
3. IF YOU HAVE A DISC DRIVE YOU NEED TO PUT IN THE POKE 26112,0 TO TURN OFF THE MOTOR OR TURN OFF THE DISC DRIVE WHEN NOT IN USE TO EXTEND THE LIFE OF THE MOTOR.
4. FOR THOSE WITH THE GAME CARTRIDGES BE SURE AND WAIT ABOUT A MINUTE AFTER TURNING OFF THE UNITS BEFORE REMOVING OR PLUGGING IN THEM OR THE BASIC INTERPRETER CARTRIDGE.

****

FROM ALAN CHEN

ALAN WRITES TO US WANTING TO KNOW HOW TO DIVIDE STRINGS.

ANSWER

IN MOST MACHINES THIS IS DONE WITH THESE COMMANDS.....

LEFT$(A$,#) = THIS IS USED TO GET A NUMBER(#) OF CHARACTERS FROM THE LEFT END OF STRING A$.

RIGHT$(A$,#) = SAME AS LEFT BUT IT GETS CHARACTERS FROM THE RIGHT END OF THE STRING A$.

MID$(A$,#,#) = THIS IS USED TO RETREIVE DATA FROM THE MIDDLE OF THE STRING A$.

NONE OF THESE COMMANDS ARE IN THE IM-1 SO WE HAVE TO USE OTHER METHODS TO ACCOMPLISH THIS. HERE IS A SAMPLE PROGRAM SHOWING A VERY BASIC WAY TO DO THE ABOVE.

```
  10  DIM A$(20),B$(10)
  20  A$="ABCDEFGHIJKLMNOPQRSTU"
  100 REM "THE AMOUNT OF DATA I WILL BE SEPARATING OUT OF A$
  200 REM "IS DETERMINED BY THE SIZE OF B$, IN THIS CASE 10.
  1000 REM "THIS GETS THE LEFT END (LEFT$)"
  1010 B$=A$(0)
  1020 PRINT B$
  2000 REM "THIS GETS THE RIGHT END (RIGHT$)"
  2020 B$=A$(11)
  2030 PRINT B$
  3000 REM "THIS WILL GET THE MIDDLE (MID$)"
  3010 B$=A$(5)
  9000 STOP
```

FOR THOSE WANTING TO GET A LITTLE FINER CONTROL YOU CAN TRY USING THE 'LEN(A$)' COMMAND. THIS WILL GIVE YOU THE LENGTH OF 'A$' SO YOU CAN DIVIDE IT DOWN FURTHER.

EXAMPLE OF THE USE OF THE 'LEN' COMMAND:

```
    5 DIM A$(50)
    10 A$="ABCDEFGHIJKLMNOPQRSTUVWXYZ"
    20 L=LEN(A$)
    30 REM "L WILL EQUAL 26 IF PRINTED"
```

THE 'LEN' WILL ONLY RETURN THE LENGTH OF THE PORTION OF A$ WHICH CONTAINS DATA.

REMEMBER THIS IS A VERY BASIC WAY OF DOING THIS SO DON'T BE AFRAID OF EXPERIMENTING WITH IT. IF YOU COME UP WITH SOMETHING THAT WORKS BETTER LET ME KNOW!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!

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CALL BOX CALL BOX CALL BOX

HERE IS A LIST OF CALL'S TO MAKE SOME NOISE FOR YOU.
CALL17001, CALL17005, CALL17006, CALL17007, CALL17014, CALL17017

THE FOLLOWING ROUTINES ARE FOR USE IN MACHINE LANGUAGE PROGRAMS.
HERE ARE SOME MACHINE LANGUAGE JSR ROUTINES FOR THE DISC DRIVE.

1. SELECT DISK DRIVE
   LIMIT: SELECT DRIVE 0 OR 1
   SETUP: $A025 = $31 DRIVE 1 SELECTED
          $A025 <> $31 DRIVE 0 SELECTED
   JSR $68A7
   RETURNS : NONE
2. MOVE HEAD TO A SPECIFIED TRACK, SECTOR
   LIMIT : TRACK 33 , SECTOR 8
   SETUP : 'A' REGISTER - TRACK (0-33)
           'B' REGISTER - SECTOR (1-8)
   JSR $6A9A
3. MOVE HEAD TO TRACK 00
   LIMIT : NONE
   SETUP : NONE
   JSR $6B0F
4. READ DISK SECTOR
   LIMIT : READS 1 SECTOR
   SETUP : HEAD MUST HAVE BEEN POSITIONED ON SELECTED TRACK& SECTOR.
   JSR $6A44
   RETURNS : THE 256 BYTES OF THE SECTOR ARE LOCATED IN THE I/O BUFFER WHICH IS AT $A300 - $A3FF
5. WRITE DISK SECTOR
   LIMIT : WRITES 1 SECTOR
   SETUP : HEAD MUST HAVE BEEN POSITIONED ON SELECTED TRACK & SECTOR. I/O BUFFER CONTAINS THE DATA TO BE WRITTEN ON THE DISK.
   JSR $6AC8
6. FORMAT (INIT) : JSR $6839
7. DIR : JSR $6967

THANKS TO LOUIS BOLDUC FOR THE INFORMATION. THIS IS SOME MORE FROM HIS SMALL BOOK HE SENT ME. THANKS LOUIS

****

BASIC BOX BASIC BOX

THE COMMANDS I AM GOING TO COVER THIS MONTH ARE ASC & CHR$

1. ASC = THIS IS USED TO CONVERT A SINGLE CHARACTER (A) TO ITS INTERGER VALUE (65).

2. CHR$ = THIS IS USED TO CONVERT AN INTERGER VALUE (65) TO THE CHARACTER (A) REPRESENTED. THE INTERGER VALUE IS THE DECIMAL EQUIVALENT.

HERE IS A SIMPLE PROGRAM TO SHOW HOW TO USE THEM.

```
10 DIM A$(25), B$(25)
20 A$="ABCDEFGHIJKLMNOPQRSTUVWXYZ"
100 FOR I = 0 TO 25: PRINT ASC(A$(I));" ";:NEXT I
200 FOR I= 65 TO 91:B$(I-65)=CHR$(I):NEXT I
300 PRINT B$
310 PRINT:STOP
```

THE PROGRAM AT 100 SHOULD CONVERT THE DATA IN A$ TO THE INTERGER VALUE AND PRINT IT. THE PART AT 200 WILL FILL B$ WITH THE SAME DATA IN A$ AND THEN 300 WILL PRINT IT. HAVE FUN

WELL FOLKS HERE IS THE NEXT EXCITING CHAPTER FROM LOUIS

WHEN YOU GIVE A 'SAVE' COMMAND, HERE'S WHATS GOING ON:

1.THE COMPUTER CHECKS FOR SPACE ON THE DISKETTE.(16 FILE LIMIT)

2.THE COMPUTER CHECKS IN THE DIRECTORY OF THE DESTINATION DRIVE IF THE FILE ALREADY EXISTS, IT WILL BE DELETED, WHICH IS VERY STUPID!! IN THE CP/M SYSTEM, THE NEW FILE IS SAVED ON A TEMPORARY NAME AND IF NO ERRORS OCCURED DURING THE SAVING, THE OLD ONE IS DELETED. I WILL EXPLAIN A LITTLE LATER HOW THE COMPUTER DELETES A FILE.

3.THEN THE COMPUTER BUILDS A TABLE OF ALL THE FREE SECTORS ON THE DISKETTE BY LOOKING IN THE 'GAT' AND SORTS THE SECTORS AS FOLLOWS:

THE TRACKS ARE CLASSIFIED IN AN ASCENDANT ORDER.
THE SECTORS ARE CLASSIFIED IN A DESCENDANT ORDER.

EXAMPLE OF A SORT: TRACK 0 SECTOR 8
TRACK 0 SECTOR 7
TRACK 1 SECTOR 7
TRACK 1 SECTOR 5
TRACK 1 SECTOR 4
TRACK 2 SECTOR 6
TRACK 4 SECTOR 7
ETC

THE 'FSAT' WILL BE PLACED ON THE FIRST SECTOR AVAILABLE.

4.THE FCB IS PRINTED IN THE DIRECTORY.

EXAMPLE:IF THE FILENAME IS TEST AND THE FIRST SECTOR AVAILABLE IF SECTOR 8 OF TRACK 0, THEN THE 'FCB' WILL CONTAIN:

54 45 53 54 20 20 20 20 00 08 53 00 00 00 00 00

IT WILL BE PRINTED IN THE DIRECTORY AFTER THE LAST 'FCB'.

5. THE COMPUTER IS NOW READY TO SAVE THE PROGRAM. IT WILL SAVE IT BY FILLING UP THE SECTORS IN THE ORDER GIVEN BY THE SORT. IN THE LAST EXAMPLE, THE PROGRAM WOULD BE SAVED ON TRACK 0, SECTOR 7,TRACK 1,SECTOR 7,TRACK 1,SECTOR 5.....UNTIL THE END OF THE PROGRAM IS ENCOUNTERED. WHEN SAVING, THE COMPUTER KEEPS TRACK OF ALL THE SECTORS USED BY THE PROGRAM. WHEN THE SAVING IS COMPLETED, THE COMPUTER FILLS UP THE 'FSAT' WITH ALL THE TRACKS AND SECTORS NUMBERS USED BY THE FILE.

EXAMPLE : THE FILE TOOK THREE SECTORS AND THE AVAILABLE SECTORS WERE THE ONES IN THE LAST EXAMPLE. THE FSAT WILL CONTAIN
00 08 00 07 01 07 01 05 00 00 ....
THE 246 BYTES LEFT IN THE FSAT ARE SET RANDOMLY BY THE CONTENTS OF THE I/O BUFFER AT THAT MOMENT. BYTES 10 AND 11 ARE SET TO 00 TO INDICATE THAT THERE IS NO MORE VALID INFORMATION TO BE READ.

6. THE COMPUTER GOES BACK IN THE 'GAT' TO SET IN THE TABLE THE SECTORS USED BY THE FILE. THE 'GAT' ORGANIZATION IS A BIT HARD TO UNDERSTAND BUT VERY SIMPLE. ONLY THE FIRST 34 BYTES ARE USED ONE FOR EVERY TRACK. THE FIRST BYTE OF THE 'GAT' INDICATES THE FREE SECTORS ON TRACK ZERO. THE SECOND BYTE THE FREE SECTORS ON TRACK ONE. THE THIRD BYTE TRACK 2 AND SO ON. EACH BIT OF THE BYTE INDICATES IF THE SECTOR IS USED OR NOT. BIT SET TO 1 INDICATES A USED SECTOR, BIT SET TO 0 INDICATES AN UNUSED ONE.

EXAMPLE : IF THE FIRST BYTE OF THE 'GAT' CONTAINS 3, WHICH IS IN BINARY 00000011, WELL, SECTOR 1 AND 2 ON TRACK 0 ARE USED.

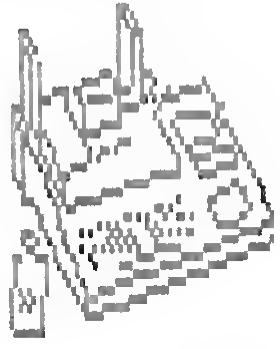
WELL THAT IS ALL THE ROOM FOR THIS MONTH.....THANKS LOUIS

```
0  CALL 17946: SHAPE =15: GOSUB 8000
1  MUSIC "5 5 5 5 5 5 3 2 1 #1 #1 #1 #1 #2 #1 7 6"
2  MUSIC " 5 5 5 5 #1 6 5 3 2 2 2 3 200"
3 Q=0
4 Z=3
5 A=0:B=25:C=0:D=10:E=11:F=12
6 M=26
7 T=40:R=57
8 J=15:K=7:L=28
9 O=13:P=27
10  CALL 17946
11  DIM A$(9), KEY$ (1)
12  PRINT "          #FROGGER?#          ": PRINT : PRINT : PRINT : PRINT : PRINT : PRINT "              BY
13  PRINT : PRINT : PRINT "       J. ALEX ORAUSHON        ": PRINT : PRINT "USE RIGHT KEYBOARD TO MOVE FROG"
14  FOR AN=1 TO 550: NEXT AN
15 X=16:Y=14
20  POKE 24579,32
30  SHAPE =15
32  COLOR =2: HLIN 0,31,10: HLIN 0,31,11: HLIN 0,31,12: HLIN 0,31,13
33  FOR G=1 TO 8
34  HLIN 0,31,G
35  NEXT G
40  COLOR =4
50  HLIN 0,31,15: HLIN 0,31,14
60  HLIN 0,31,9: HLIN 0,31,8
70  COLOR =5: HLIN 0,31,0
80  PLOT 0,1: PLOT 6,1: PLOT 12,1: PLOT 18,1: PLOT 24,1
90  PLOT 31,1
100  IF Z>2 THEN  COLOR =0: PLOT 3,15
101  IF Z>1 THEN  COLOR =0: PLOT 1,15
103  COLOR =5: PLOT 0,2: PLOT 6,2: PLOT 12,2: PLOT 18,2: PLOT 24,2: PLOT 31,2
105  COLOR =2: VLIN 10,12,31
106  COLOR =4: PLOT 16,14
107  POKE 1022,R: POKE 1023,T
108  IF T=40 THEN T=58:R=R-1
109  IF R=47 THEN 4000
110  COLOR =3: PLOT A,D: COLOR =1: PLOT B,E: COLOR =6: PLOT C,F
111  COLOR =1: PLOT M,E: COLOR =6: PLOT O,F: PLOT P,F
112 T=T-1
113  COLOR =3: PLOT J,D: COLOR =1: PLOT K,E: COLOR =6: PLOT L,F
114  IF J=31 THEN J=0: IF K=31 THEN K=0: IF L=31 THEN L=0
115  IF A=31 THEN A=0
116  IF M=31 THEN M=0
117  IF B=31 THEN B=0
118  IF C=31 THEN C=0
119  IF O=31 THEN O=0
120  IF P=31 THEN P=0
126  MUSIC "07"
127  COLOR =2: PLOT A,D: PLOT B,E: PLOT C,F: PLOT M,E: PLOT J,D: PLOT K,E: PLOT L,F: PLOT O,F: PLOT P,F
128  COLOR =2: PLOT X,Y
129  LET R$= KEY$ (1)
130  IF R$="" THEN 190
140  IF A$="N" THEN Y=Y-1
150  IF A$="S" THEN Y=Y+1
160  IF R$="E" THEN X=X+1
170  IF A$="W" THEN X=X-1
179  COLOR =0
180  PLOT X,Y
181  IF X=J THEN 195
```

```
182  IF X=K THEN 197
183  IF X=L THEN 199
184  IF X=O THEN 199
185  IF X=P THEN 199
190  IF X=A THEN 195
191  IF X=@ THEN 197
192  IF X=C THEN 199
193  IF X=N THEN 201
194  GOTO 205
195  IF Y=D THEN  MUSIC "1 1 11 3 22 11 23   ":Z=Z-1:X=16:Y=14
196  GOTO 191
197  IF Y=E THEN  MUSIC "1 1 11 3 22 11 32   ":Z=Z-1:X=16:Y=14
198  GOTO 192
199  IF Y=F THEN  MUSIC "1 1 11 3 22 11 32   ":Z=Z-1:X=16:Y=14
200  GOTO 193
201  IF Y=E THEN  MUSIC "1 1 11 3 22 11 32   ":Z=Z-1:X=16:Y=14
205  IF Z=0 THEN  CALL 17046: PRINT "      THE    END       ": PRINT : PRINT : PRINT : PRINT : GOTO 5000
206  IF Z=2 THEN  COLOR =4: PLOT 5,15
207  IF Z=1 THEN  COLOR =4: PLOT 3,15
209  IF Y<3 THEN O=O+1
210  IF Y<3 THEN  MUSIC "5653667451134"
212  IF Y<3 THEN Y=14:X=16
300  COLOR =4: HLIN 0,31,8: HLIN 0,31,9
310 A=A+1:@=B+1:C=C+1:N=M+1
311 J=J+1:K=K+1:L=L+1
312 O=O+1
313 P=P+1
320  GOTO 105
4000  IF Q=5 THEN  GOTO 4008
4001  PRINT "YOU'VE RUN OUT OF TINE !!!!!!!": PRINT "YOU JUST LOST A FROG."
4002  GOTO 4050
4005  IF Z<>3 GOTO 4001
4009  CALL 17046
4010  PRINT "$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$": PRINT "$$$$$$$$$$$$$$BONUS$$$$$$$$$$$$$$"
4011  MUSIC "5 3@  3 4 5  3@ 3@ 1@@  5 3@  3 4 3  5@ 5@ 4@@@ $2@ $1@ 7@ 6@ 5@ 4@ 3@ 2@ 1@@@@"
4020  GOTO 4070
4050  FOR I=1 TO 2@: MUSIC "7 1@ "
4055  NEXT I
4060 Z=Z-1
4070 T=48:R=57
4100  GOTO 1@
5000  PRINT " YOU SAVED ";Q;" FROGS '       "
5010  MUSIC "5 5 5 5 5 3 2 1 $1 $1 $1 $1 $2 $1 7 6 5 5 $I 6 7 $1 $2 7 $1@@@@@@@@"
5020  PRINT "PRESS 'ENTER' KEY TO RESET GAME"
5025 A$= KEY$ (1)
5030  IF A$=" " THEN  GOTO @
5050  GOTO 5025
8000  COLOR =6: VLIN 1,5,1: HLIN 1,4,1: HLIN 1,4,3: REM    "F"
8010  COLOR =2: VLIN 8,13,4: HLIN 4,8,8: HLIN 4,8,10: PLOT 8,9: PLOT 6,11: PLOT 7,12: PLOT 8,13
8020  COLOR =1. HLIN 8,11,3: HLIN 8,11,7: VLIN 3,7,8: VLIN 3,7,11
8030  COLOR =@: HLIN 12,15,@: HLIN 12,15,5: VLIN @,5,12: VLIN 3,5,15: PLOT 14,3
8040  COLOR =4: HLIN 15,19,1@: HLIN 15,19,15: VLIN 1@,15,15: VLIN 13,15,19: PLOT 18,13
8050  COLOR ="1 VLIN 6,11,21: HLIN 21,25,6: HLIN 21,25,8: HLIN 21,25,11
8060  COLOR =5: VLIN @,5,26: HLIN 26,31,@: HLIN 26,31,2: PLOT 31,1: PLOT 28,3: PLOT 29,4: PLOT 3@,5: PLOT 31,5
8100  MUSIC "5  3 1 $1  7 6 5  $1 3 2 5  "
8110  MUSIC "       "
9000  RETURN
```

```
1  REM   "PROGRAM SUBMITTED BY CHUCK CLANCY"
2  REM   "THIS IS A NUMERIC SORT ROUTINE"
5  POKE 24578,38
8  DIM W$(1)
20  CALL 17046: POKE 46960,1.99
30  PRINT : PRINT : PRINT " S O R T   R U N N I N G"
40  PRINT : PRINT "SETTING UP THE ARRAY"
50  DIM A(40)
60  FOR I=0 TO 39:A(I)=0: NEXT I
70  CALL 17046: POKE 45960,1.9
80  PRINT : PRINT : PRINT
85 I=0
86  PRINT "ENTER -9999 TO SORT"
90  INPUT "ENTER NUMBER--",A(I)
95  IF A(I)=-9999 THEN I=I-1: GOTO 200
100 I=I+1
110  GOTO 90
200  CALL 17046: POKE 46960,2: PRINT "W A I T   P L E A S E"
201  PRINT "I'M TRYING SOOOO HARD"
205  FOR J=0 TO I-1
210  FOR K=J+1 TO I
220  IF A(J)>=A(K) THEN HOLD=A(J):A(J)=A(K):A(K)=HOLD
230  NEXT K
240  NEXT J
250  FOA K=0 TO I: PRINT A(K)
260  IF K=14 THEN  INPUT "TYPE <RTN> FOR MORE",N$
270  NEXT I
280  PRINT "MORE? "
290  IF  KEY$ (0)="Y" THEN  FOR X=1 TO 20: NEXT X: GOTO 20
295  IF  KEY$ (0)="N" THEN  FOR X=1 TO 20: NEXT X: GOTO 310
300  GOTO 290
310  CALL 17046: POKE 46960,2: PRINT "S O R T   C O M P L E T E": PRINT "       B Y E": END
```

LONELY COMPUTERS



ELAINE HOM, 39 MORTON PLACE
EAST ORANGE, NEW JERSEY 07017
I AM A SENIOR IN HIGH SCHOOL.
I PLAN TO GO TO COLLEGE IN THE
FALL AND MAJOR IN ENGINEERING. I
HAVE A 16K IM-1 COMPUTER WITH
PRINTER, DISK DRIVE & MODEM.

****
DEBORAH FISCHER, 3008 BAYLOR ST
BAKERSFIELD, CALIFORNIA 93305
I AM A 24 YEAR OLD HOUSEWIFE'
AND ENJOR ROLE PLAYING GAMES
LIKE DUNGEONS AND DRAGONS.
****
RON BISSEY, 604 ALONOW DRIVE
GILLETTE, WYOMING 82716
307-686-0886
****
RON FORBIS, 2418 CARMEL RD
BIRMINGHAM, ALABAMA 35235
205-854-3963
HAM RADIO OPERATOR CALL SIGN
NN4M , WISH TO CONTACT OTHER
HAM/APF USERS.
****

```
0  REM   "PROGRAM SUBMITTED BY CHUCK CLANCY, THIS IS A ALPHA SORT"
1  POKE 24578,30
2  DIM N$(1)
3  DIM NULL$(20)
4  FOR I=0 TO 20:NULL$(I)=""
5  CALL 17046: POKE 40960,1.9
10  DIM A$(30,20)
11  DIM H$(20)
12  FOR I=0 TO 20:A$(I,1)=NULL$
20  CALL 17046
21 H$=""
30  POKE 40960,1.9
40 L=0
45  PRINT : PRINT : PRINT
50  PRINT : PRINT : PRINT "S O R T   R U N N I N G"
65  PRINT : PRINT "ENTER NAMES---999 TO QUIT"
70 B=0
80  INPUT A$(B,20)
90 B=B+1
92 C=B-1
95  IF A$(C,20)="999" THER B=B-1: GOTO 200
100  GOTO 80
200  CALL 17046: POKE 40960,2: PRINT : PRINT : PRINT "WAIT PLEASE": PRINT "S O R T I N G"
201  FOR I=0 TO B-1
210  FOR K=I+1 TO B
220  IF A$(I,20))=A$(K,20) THEN H$=A$(I,20):N$(I,20)=N$(K,20):A$(K,20)=H$
230  NEXT K
240  NEXT I
250  FOR I=1 TO B
260  PRINT A$(I,20)
265  IF I=14 THEN  INPUT "TYPE <RTN>",N$
270  NEXT I
280  INPUT "TYPE <RTN> TO QUIT",N$
281  IF N$="" THEN 290
282 N$(0)="":N$(1)="": GOTO 5
290  PRINT : PRINT "SORT COMPLETED": PRINT : PRINT "          B Y E": END
```

TAPE #10,#11,#12,#13 & #14
THESE TAPES CONTAIN PROGRAMS
SUBMITTED BY ***CHUCK CLANCY***
FOR THE CLUB. DUE TO THE NUMBER
WE GIVE SPECIAL ***THANKS***
TO CHUCK.
TAPE #10
DIRECTORY
BATTLESHIP
STAR BUSTERS
SHAPE LOADER
FILL-IT-IN
TAPE #11
SPELL-IT
ROCKETS & STARS
MEMORY TO SCREEN
RAM LOAD OF ROCKET PATROL
HANDYS MATH

TAPE #12
SKETCH SHAPES
BASIC SHAPE MOVES
MULTIPLICATION TABLES
SOUND LOOPS
DATA RECORDS
TAPE #13
ALPHA-SORT
NUMBER SORT
HEX TO DEC
DEC TO HEX
KEYBOARD SKETCH
TAPE #14
6800 PEEKER
GARAGE SALE
SOUND EFFECTS
PADDLE SKETCH

HEY FOLKS HERE IS A LIST OF
PROGRAMS THAT WE HAVE AVAILABLE
ON TAPE. WHEN ORDERING PLEASE
SPECIFY THE 2 THAT YOU WANT
ON YOUR TAPE FOR THE $5.00.
THANKS EDITOR
TAPE #1
CE3K--FUN PROGRAM
HI RES2---HI RES HELPER PROGRAM
HI RES3---HI RES HELPER PROGRAM
HEX-DEC---HEX-DEC OR DEC-HEX
MUSIC----FUN PROGRAM
TAPE #2
METRIC---METRIC & STAND. CONV.
SPEIL---GAME PROGRAM IN GERMAN
HI RES1---HI RES HELPER PROGRAM
DATATAP---USE CASSETTE FOR DATA
MEAN---FIGURE THE MEAN OF #'S
TAPE #3
BLACKJK---BLACKJACK GAME
CAPITOL---STATE CAPITOL ANSWERS
FROGGER---SIMPLE BUT GOOD GAME
LETMACH---SIMPLE LETTER MACHINE
TV LOGO---DISPLAYS PICTURE
TAPE #4
MAGICSQ---GAME
BATTLE8---GAME
SPIRAL2---VISUAL DISPLAY
TAXPROG---SIMPLE TAX PROGRAM
AUDIOMC---AUDIO RECORDING PROG.
TAPE #5
IX CALL---MENU & MULTI PROG. EX.
TONETST---MAKES LOTS OF NOISE
LETTPRO---ANOTHER LETTER PROGRAM
BANKREC---SIMPLE BANK BAL PROG
HOULETT---ANOTHER GAME
TAPE #6
GAL/LIT---CONVERTS GALS AND LITS
RECIPES---RECIPE RECORD PROGRAM
MATH ---MATH PROGRAM
BIRTHDA---PLAYS & DISPLAY B DAY
ENGLISH---SIMPLE ENGLISH LESSON
TAPE #7
SNAKE ---ANOTHER GAME
ALPHAS ---HI RES ALPHA CHARACTER
MEMTEST---MEMORY TEST PROGRAM
STROBE ---LOTS OF FLASH & POP
TAPE #8
1040A&B---TAX PROGRAM
FORCRST---FUN PROGRAM
SCREEN ---SCREEN IMAGE PROGRAM
MATCHES---15 MATCHES,,,FUN
SQ ROOT---BASIC SQ ROOT
TAPE #9
SPACEDL---SPACE DUEL   GOOD
HI RES4---HI RES HELPER PROGRAM
TAPECAT---TAPE CATALOG PROGRAM
GRAPHIC---BUILD SHAPES & DISPLAY
WUMPUS---GAME

```
0  REM   "THIS PROGRAM WAS SUBMITTED BY GLENN JONES AND WILL BE A BREAT HELP FOR HI-RES"
1  CALL 17046
2  PRINT "WITH THIS PROGRAM YOU WILL BE   ABLE TO BUILD MODE 1 HI-RES     SHAPES AND THEN DISPLAY THEM."
3  PRINT "THIS PROGRAM IS SET UP TOO USE  JUST ONE SET OF THE COLORS AVAILABLE BUT CAN BE CHANGED TO USE  ALL"
4  PRINT "WHEN IT ASKS FOR THE BYTE IT    NEEDS THE FOUR COLORS YOU WANT  IN THAT BYTE OF THE SHAPE."
5  INPUT "HIT RETURN",N$: PRINT "YOU CAN ONLY USE G = GREEN, Y = YELLOW, B = BLUE AND R = RED."
6  PRINT "AFTER YOU KEY IN THE ALL 16     BYTES IT WILL DISPLAY THE CHAR- ACTER THAT YOU HAVE BUILT."
7  PRINT "TO RETURN TO THE PROGRAM HOLD   'RETURN' AND IT WILL PRINT OUT  THE DECIMAL VALUES FOR THE SHAPE"
8  PRINT "AND THESE CAN BE PUT IN A DATA  STATMENT TO USE IN YOUR PROGRAN.IF THE OTHER COLORS ARE WANTED"
9  PRINT "JUST ADD 64 TO EACH BYTE.": INPUT "HIT RETURN",N0
10  POKE 24578,38: CALL 17046: DIM L(4),S(63),B$(1),B$(3)
12  INPUT "HOW MANY SHAPES (1-4) ",NS: PRINT : PRINT
13  FOR Z=1 TO NS: PRINT "SCREEN LOC. FOR SH #";Z;" (0-383)";: INPUT L(Z): NEXT
15  PRINT "WHAT COLOR OF BACKGROUND:": PRINT "   GREEN  (G)": PRINT "   YELLOW (Y)": PRINT "   BLUE   (B)": PRINT "   RED    (R) ";:
 INPUT BG$
16  IF BG$(0)="Y" THEN B0=85: GOTO 20
17  IF BG$(0)="B" THEN B0=170: GOTO 20
18  IF BG$(0)="R" THEN B0=255: GOTO 20
19 B0=0: IF BG$(0)<>"G" THEN 15
20  FOR Y=1 TO NS: CALL 17046: PRINT "SHAPE # ";Y: FOR Z=Y*16-16 TO Y*16-1:B$="    "
21 BN=Z: GOSUB 3000: PRINT "BYTE ";BN;"= ";: INPUT B$
30 R=0: IF B$(0)="G" THEN 35
31  IF B$(0)="Y" THEN R=R+64: GOTO 35
32  IF B$(0)="B" THEN R=R+128: GOTO 35
33  IF B$(0)="R" THEN R=R+192: GOTO 35
34  GOTO 55
35  IF B$(1)="G" THEN 40
36  IF B$(1)="Y" THEN R=R+16: GOTO 40
37  IF B$(1)="B" THEN R=R+32: GOTO 40
38  IF B$(1)="R" THEN R=R+48: GOTO 40
39  GOTO 55
40  IF B$(2)="G" THEN 45
41  IF B$(2)="Y" THEN R=R+4: GOTO 45
42  IF B$(2)="B" THEN R=R+8: GOTO 45
43  IF B$(2)="R" THEN R=R+12: GOTO 45
44  GOTO 55
45  IF B$(3)="G" THEN 50
46  IF B$(3)="Y" THEN R=R+1: GOTO 50
47  IF B$(3)="B" THEN R=R+2: GOTO 50
48  IF B$(3)="R" THEN R=R+3: GOTO 50
49  GOTO 55
50 S(Z)=R: NEXT : NEXT : GOTO 60
55  PRINT "INCORRECT--TRY AGAIN": GOTO 21
60  POKE 8193,60: POKE 8194,150
65  FOR Z=512 TO 527: POKE Z,B0: NEXT
90  FOR Z=528 TO 528+16*NS-1: POKE Z,S(Z-528): NEXT
100  FOR I=0 TO 383: POKE I,0: NEXT
110  FOR I=1 TO NS: POKE L(I),I: NEXT
200  IF  KEY$ (0)="" THEN 200
201  POKE 8194,30
2000  PRINT : PRINT "SHAPE 1": FOR J=0 TO 15: PRINT S(J);",";: NEXT : IF NS<2 THEN 4000
2002  PRINT : PRINT "SHAPE 2": FOR J=16 TO 31: PRINT S(J);",";: NEXT : IF NS<3 THEN 4000
2004  PRINT : PRINT "SHAPE 3 : ": FOR J=32 TO 47: PRINT S(J);",";: NEXT : IF NS<4 THEN 4000
2006  PRINT : PRINT "SHAPE 4 : ": FOR J=48 TO 63: PRINT S(J);",";: NEXT : GOTO 4000
3000  IF BN>15 THEN BN=BN-16: GOTO 3000
3001  RETURN
4000  PRINT : PRINT "1-NEW","2-DISPLAY","3-STOP";: INPUT Q: ON Q GOTO 12,80,9000,4000
9000  END
```

DUE TO THE COST OF PRINTING WE WILL HAVE TO REQUEST THAT THE MEMBERS AND NON-MEMBERS SUBMIT ONLY ONE AD PER MONTH AND KEEP THE AD AS SMALL AS POSSIBLE. THE COST WILL BE 25 CENTS PER LINE FOR MEMBERS AND 75 CENTS PER LINE FOR NON-MEMBERS. ADS WILL BE PUBLISHED IN THE ORDER WE RECEIVE THEM. ANY LEFT OVER WILL BE PUT IN THE NEXT MONTHS AD. DEADLINE FOR ADS IS THE 20TH!!!!!!!!!! THE WANT ADS ARE INTENDED FOR PERSONAL USE BY THE MEMBERS AND NON-MEMBERS WHO WISH TO SELL USED HARDWARE OR SMALL PROGRAMS. THEY ARE NOT INTENDED FOR COMMERICAL USE. IF YOU THINK YOU QUALIFY FOR A COMMERICAL AD PLEASE WRITE AND WE WILL SEND YOU A STATEMENT OF OUR POLICY AND THE PRICES. THANKS EDITOR

WANTADS WANTADS

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NUMBER FREQUENCY ANALYSIS-------
ENTEN ANY LIST OF NUMBERS OF 4 DIGITS OR LESS AND YOUR COMPUTER KEEPS A RUNNING RECORD OF WHICH DIGITS FELL WHERE AND HOW MANY TIMES. SAVES TO TAPE, RECALLS FROM TAPE. GREAT FOR LOTTERIES, ANY LIST OF NUMBERS. SEND $8.00 TO CRATAA INSTRUMENTS, PO BOX 38, WOODBURY HEIGHTS, N.J.08097

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INTRODUCING %ALPHA CENTAURI%
%FAST ACTION%ARCADE QUALITY%
%K%HI-RES%MACH LANGUAGE%BATTLE DIVING ALIENS AND SAVE THE PLANET NIBAN FROM DESTRUCTION%
%EXCELLENT GRAPHICS%SOUND%KIDS (AND ADULTS) LOVE IT. CASSETTE
SEND CHECK OR MONEY ORDER TO:
GEORGE KARABIN
RD #1 BOX 447
BELLE VERNON PA 15012

!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!

HEY FOLKS THE AD IS NOT EXAGGERATING. THE GAME IS VERY GOOD!!
EDITOR

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%CONCENTRATION% A COMPUTERIZED VERSION OF THE CARD GAME. GREAT MEMORY EXERCISE. AGES 5 TO ADULT $4.95 SEND MO TO JOE JONES RT 4 BOX 84A, COFFEYVILLE, KS 67337

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SYSTEM ROM DISASSEMBLED:ALL 14K NOT COMMENTED, BUT ALL BASIC STATEMENT ROUTINES ARE LABELED. USE TO CALL ROM ROUTINES OR AS A GUIDE FOR YOUR OWN. $10.00 FOR OVER 7000 LINES OF CODE ON A 45 PAGE, 132 COLUMN PRINTOUT. SEND CHECK OR MONEY ORDER TO: JEFF RICHARDSON, 104 AUSTIN AVE. SYRACUSE, NEW YORK 13207

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FOR SALE: TI-1 LIKE NEW, INCLUDING , OWNERS MANUAL, INST MANUAL AND MA-300 CASSETTES, TECHNICAL REFERANCE MANUAL, MA-300 BUDGET MANAGER II, MA-425 ELECTRONIC FILES, MA-575 SPACE DESTROYERS, MS-1008 BACKGAMMON, MS-1010 UFO/SEA MONSTERS/ETC., MS-1011 PINBALL/DUNGEON HUNT, CLUB LETTERS, FROM BEGINNING, SUBSCRIPTION GOOD THROUGH DEC 1983.
A.L. MORRIS, 2612 FORREST AVE, ST ALBANS, WV 25177,
304-727-6436 ALL FOR $250 SEND CERTIFIED CHECK.....

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FOR SALE:TI 23K RAM TI-1 COMPUTER WITH THE FOLLOWING TAPES: AN ADVENTURE IN MURDER, DEPTH CHARGE, SPACE DESTROYERS, STARSHIP, ROAD RUNNER, CASY(ASSEMBLER),FINANCE, GRAPHIC PRIMER, HUEY(SUPER CALCULATOR) W/MANUAL AND R EISMAN'S SECRET MANUAL. A BARGIN AT $325. CALL OR WRITE: J COATES
13 TEMPLETON RD
WALLINGFORD, CT
06492
AFTER 6 PM EST 203-265-5853

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%%ENTRAP%% TRAP YOUR OPPONENT BEFORE HE TRAPS YOU. YOU CONTROL A MOVING WALL WHILE TRYING TO FORCE YOUR OPPONENTS WALL TO RUN INTO ITS SELF (LIKE SURROUND). IT'S A GAME OF QUICKNESS, SKILL, AND STRATEGY. SEVEN DIFFICULT LEVELS. ONLY $4.00 BRETT LECADIX 4940 BUFFWOOD WAY, SACRAMENTO, CALIFORNIA 95841

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

LONESOME COMPUTERS

SO MANY PEOPLE HAVE REQUESTED TO BE PUT IN TOUCH WITH OTHER IM-1 OWNERS THAT WE DECIDED TO ADD THIS PAGE DEVOTED TO THEM. WE WOULD NOT PRESUME TO GIVE OUT ANYONES NAME OR ADDRESS WITHOUT THEIR EXPRESS PERMISSION TO DO SO. IF YOU WISH TO BE CONTACTED, ALL YOU NEED TO DO IS FILL OUT THIS SECTION AND SEND IT TO US. WHO KNOWS, THERE MAY BE SOMEONE DOWN THE BLOCK WHO'S DYING TO MEET YOU.

----CHECK HERE IF YOU DO NOT WANT THIS INFORMATION PUBLISHED!!!!

NAME=----------*TELL US A LITTLE ABOUT YOURSELF

ADDR=----------*

CITY=----------*

STATE=----------*

ZIP=----------*

PHONE=----------*

BLANK WANT AD

EACH LINE CAN CONTAIN 32 CHARACTERS INCLUDING SPACES.

LINE 1.

LINE 2.

LINE 3.

LINE 4.

LINE 5.

LINE 6.

LINE 7.

LINE 8.

LINE 9.

LINE 10.

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IM-1 in a MILLION
PO BOX 1411
SPRINGDALE
ARKANSAS 72764

DATE MAILED 4/4/83

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2-BUY ANY INTERFACE AND GET 25% OFF THE SECOND
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